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USER'S GUIDE TO ACCESSING THE ANTHROPOMETRIC DATA BASE AT THE CENTER FOR ANTHROPOMETRIC RESEARCH DATA (U)

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AAMRL-TR-88-012

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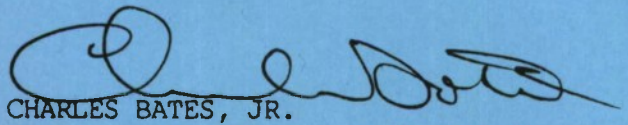
FOR THE COMMANDER



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The Anthropometric Data Base at the Center for Anthropometric Research Data contains hundreds of measurements from numerous surveys taken all over the world. As new data collections are received, they are integrated into the data base. The entire collection is sorted into a menu driven system which will allow the user to find information in a variety of ways. This document is a guide to users for accessing this information.

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SUMMARY

This document is provided to assist users in accessing the Anthropometric Data Base maintained by the Center for Anthropometric Research Data. The on-line data base was developed to be used in support of human engineering design activities. It contains several hundred measurements of the human body across large population samples from numerous published anthropometric surveys. A relational data base software package is used to manage the survey data and accommodate user queries. Access to the data base is through a menu-driven applications software package. The user may access anthropometric data by measurement title, measurement number, or by common alternate measurement name. Available data includes measurement frequency data and summary statistics (mean, standard deviation, etc.), measurement descriptions, and measurement classification by body region and measurement type. A glossary of anthropometric terms is available in the data base as well as abstracts for the various anthropometric surveys.

PREFACE

This effort was conducted by Systems Research Laboratories, Inc., Dayton, Ohio under contract number F33615-85-C-0541 (Task 88075A). Robert M. Linhart is the contract monitor.

We would like to acknowledge Mrs. Ilse O. Tebbetts for editing of the manuscript.

TABLE OF CONTENTS

USER'S GUIDE TO ACCESSING THE ANTHROPOMETRIC DATA BASE AT THE CENTER FOR ANTHROPOMETRIC RESEARCH DATA

1. INTRODUCTION

The Center for Anthropometric Research Data (CARD) is operated by AAMRL/HEG at Wright-Patterson AFB, Ohio. The CARD Anthropometric Data Base contains data collected from a variety of anthropometric surveys. Access to the data base is through menu-driven applications software. Data available include survey descriptions, measurement methods, and a glossary of anthropometric terms, as well as summary statistics and frequency data for each measurement. The ability to extract measurement data from a survey meeting specific criteria and using these data as input to a SAS procedure is also available to a limited number of users.

2. GUIDELINES FOR DATA BASE USE

All terminals used to access the menu-driven data base software must be at least VT100 compatible to support the drawing of the menu displays. Menu options may be selected by using the up or down arrow keys or by pressing the keyboard letter of the selection requested.

Each anthropometric measurement in the data base has an assigned number and measurement title. There is a standard table of abbreviations which will be displayed when measurement title input is requested. Measurement titles containing more than one word are separated by dashes (-), not spaces. For example, SITTING HT must be entered as SITTING-HT.

An alternate measurement name table contains common alternate names for measurements. For example, STATURE has an entry in the alternate name table called HEIGHT. Searches for character strings in measurement titles are also available in some menus. This is convenient when the measurement title and number are unknown and the user would like to scan the data base to pin down the actual measurement being sought. Specific measurement data may be accessed using the measurement number, measurement title, or alternate name.

3. EXECUTION OF THE DATA BASE PROGRAM

3.1 PROGRAM EXECUTION BY A FALCON VAX USER

The program is executed by authorized users logged into their FALCON VAX accounts by entering **QUERY**.

3.2 PROGRAM EXECUTION BY A NON-FALCON VAX USER

The account ANTHRO has been set up to accommodate those users of the data base who do not have FALCON VAX accounts. The QUERY software executes automatically and the user is logged out after exiting the QUERY software. The distribution of the account name and password is made at the discretion of AAMRL/HEG.

4. INTRODUCTORY SCREENS

The first screen to appear indicates the initialization of the data base and the pre-processing of selected anthropometric data. This procedure takes approximately 25-30 seconds.

The following screens display introductory messages to the anthropometric data base. A carriage return entered from the keyboard will advance to the next page.

Loading Data base files...Please wait

WELCOME TO THE
HARRY G. ARMSTRONG AEROSPACE MEDICAL RESEARCH LABORATORY
ANTHROPOMETRIC DATA BASE

This data base is a product of the Center for Anthropometric Research Data (CARD) which is operated and maintained by AAMRL/HEG at Wright-Patterson AFB, Ohio. It is a menu-driven data base which will allow you to access anthropometric data from a collection gathered from around the world. It includes descriptive information regarding the samples themselves, measurement methods, summary statistics, and a glossary of terms. The measurements are organized in many ways for ease of use.

NOTE: This data base is in the process of being developed. Data from many of the surveys listed have not yet been input. The alternate name list is incomplete. Suggestions regarding the data base are welcome.

Press <RETURN> to continue

THE FOLLOWING CONVENTIONS
ARE USED IN THIS DATA BASE

Each anthropometric measurement has an assigned name and number. The words in the name are separated by dashes, - , not spaces, e.g. ABDOMINAL DEPTH SIT would be ABDOMINAL-DEPTH-SIT.

If you are unclear about a measurement name or number, the measurement may be searched for by using a string of letters or by using common alternate names.

NOTE: A HELP utility is being developed to provide help in use of the data base while in the midst of it. This is not yet available.

Press <RETURN> to continue

CAUTIONS:

* Measures from two samples listed under the same name may have been measured slightly differently. Be cautious about drawing conclusions about differences or similarities between samples.

* Percentile values are not additive. For example, 5th percentile sitting height minus 5th percentile eye-height-sitting will not equal 5th percentile eye-to-top-of-head. To derive measures not listed, the raw data on each person must be used. Also, be cautious about using percentile values if more than one measure is to be used. Some type of "multivariate" method should be used in such cases.

Press <RETURN> to continue

5. MASTER MENU

The master menu for the anthropometric data base presents primary query options available to the user. The option requested is highlighted and selected by letter or by using the up and down arrow keys as input. A carriage return is entered when selection is complete. This is applicable for all menus throughout the data base program.

AAMRL ANTHROPOMETRIC DATA BASE

(A) LIST SURVEYS

(B) FIND MEASUREMENTS, TITLES, AND NUMBERS

(C) LIST MEASUREMENTS BY SURVEY

(D) LIST MEASUREMENTS BY BODY REGION

(E) LIST MEASUREMENT BY TYPE

(F) GLOSSARY AND MEASUREMENT DESCRIPTIONS

(G) MEASUREMENT STATISTICS

(X) EXIT PROGRAM

SELECT OPTION BY LETTER OR ARROWS AND PRESS RETURN

5.1 LIST SURVEYS

The option LIST SURVEYS displays the survey abstracts available to the user. A specific survey abstract may be selected and displayed. If anthropometric data are not yet available in the data base for the survey selected, the abstract will indicate this by displaying "NOT YET AVAILABLE".

DISPLAY SURVEY ABSTRACT

	SURVEY	SURVEY TITLE
(A)	1	AIR FORCE WOMEN 1968 NONRATED
(B)	6	AIR FORCE WOMEN 1968 PILOT SUBSET
(C)	2	AIR FORCE MEN PILOTS 1967
(D)	3	AIR FORCE MEN 1965 NONRATED
(E)	4	ARMY MEN 1966
(F)	5	ARMY WOMEN 1977
(G)	7	ARMY MEN 1977 SUBSET
(H)	8	ARMY WOMEN 1946
(I)	9	LAW ENFORCEMENT OFFICERS 1974
(J)	10	ARMY AVIATORS 1970
(K)	11	NAVY ENLISTED PERSONNEL
(L)	12	AIR FORCE PILOTS 1950
(M)	13	AIR TRAFFIC CONTROLLERS
(N)	14	HEALTH EXAMINATION SURVEY
(O)	15	ARMY AVIATORS 1959

(X) EXIT

1968 SURVEY OF AIR FORCE WOMEN

A survey of women of the Air Force was made in the spring of 1968 by the Anthropology Branch, Aerospace Medical Research Laboratory, Wright-Patterson Air Force Base, Ohio, and the Anthropology Research Project (then at Antioch College, Yellow Springs, Ohio). A description of the survey and the results are published in "Anthropometry of Air Force Women," by Clauser et al., AMRL-TR-70-5 (AD 743 113), Aerospace Medical Research Laboratory, Wright-Patterson Air Force Base, Ohio, 1972. Data for age (variable 1), 123 body size measurements (variables 2-124), and grip strength (variable 125) were obtained from a sample of 1905 women. Thirteen measurements were repeated on 1513 subjects with the subjects wearing foundation garments (variables 126-138). These are not included in this data base because they are now obsolete. This data is also described along with Volumes II-V of the AMRL Anthropometric Data Bank Library in "The AMRL Anthropometric Data Bank Library: Volumes I-V," by Churchill, Kikta, and Churchill, AMRL-TR-77-1, Aerospace Medical Research Laboratory, Wright-Patterson Air Force Base, Ohio, October 1977.

Press <RETURN> to continue.

5.2 FIND MEASUREMENTS, TITLES, AND NUMBERS

The Measurement menu presents options available for gaining access to measurement data. Items A through C serve to help the user identify the exact measurement title or number. Item D permits the user to extract the statistics for the measurement desired once the title or number is identified without having to back up to the main menu.

FIND MEASUREMENTS, TITLES, AND NUMBERS

(A) FIND MEASUREMENTS BY ALTERNATE NAME OR BY STRING

(B) GET MEASUREMENT TITLE FROM MEASUREMENT NUMBER

(C) GET SURVEYS WHERE A MEASUREMENT WAS TAKEN

(D) MEASUREMENT DATA STATISTICS

(X) EXIT

SELECT OPTION BY LETTER OR ARROWS AND PRESS RETURN

5.2.1 FIND MEASUREMENTS BY ALTERNATE NAME OR BY STRING

This option allows the user to input a measurement alternate name or a string of characters to search for a measurement number and title. The software will search the data base for all measurement titles whose alternate name contains the input character string and for all measurement titles containing the input character string.

In this example the string STATURE is entered and all those measurement titles containing the string STATURE are displayed.

FIND MEASUREMENTS BY ALTERNATE NAMES OR BY STRING

STANDARD ABBREVIATIONS

BRTH - BREADTH	HT - HEIGHT
CIRC - CIRCUMFERENCE	LTH - LENGTH
DIAM - DIAMETER	SIT - SITTING
DIST - DISTANCE	SKF - SKINFOLD
EXT - EXTENSION	STD - STANDING

INPUT MEASUREMENT TITLE OR STRING: STATURE

FIND MEASUREMENTS BY ALTERNATE NAMES OR BY STRING

NUMBER	MEASUREMENT TITLE
805	STATURE
806	STATURE-CLOTHED
807	STATURE-MAXIMUM
808	STATURE-REPORTED

Press <RETURN> to continue

In the next example the string HEIGHT is entered. Since HEIGHT is an alternate name for STATURE in the data base, the same entries as for STATURE are retrieved from the data base and displayed.

FIND MEASUREMENTS BY ALTERNATE NAMES OR BY STRING

STANDARD ABBREVIATIONS

BRTH	- BREADTH	HT	- HEIGHT
CIRC	- CIRCUMFERENCE	LTH	- LENGTH
DIAM	- DIAMETER	SIT	- SITTING
DIST	- DISTANCE	SKF	- SKINFOLD
EXT	- EXTENSION	STD	- STANDING

INPUT MEASUREMENT TITLE OR STRING: HEIGHT

FIND MEASUREMENTS BY ALTERNATE NAMES OR BY STRING

NUMBER	MEASUREMENT TITLE
805	STATURE
806	STATURE-CLOTHED
807	STATURE-MAXIMUM
808	STATURE-REPORTED

Press <RETURN> to continue

5.2.2 GET MEASUREMENT TITLE FROM MEASUREMENT NUMBER

This option requests the input of a measurement number and returns the corresponding standard measurement title from the data base.

RETRIEVE MEASUREMENT TITLE

INPUT MEASUREMENT NUMBER: 805

MEASUREMENT TITLE: STATURE

Press <RETURN> to continue

5.2.3 GET SURVEYS WHERE A MEASUREMENT WAS TAKEN

This option allows for input of a specific measurement title, number, or alternate name and retrieves and displays those surveys in which the measurement was taken.

SURVEYS WHERE A MEASUREMENT WAS TAKEN

STANDARD ABBREVIATIONS

BRTH - BREADTH	HT - HEIGHT
CIRC - CIRCUMFERENCE	LTH - LENGTH
DIAM - DIAMETER	SIT - SITTING
DIST - DISTANCE	SKF - SKINFOLD
EXT - EXTENSION	STD - STANDING

INPUT MEASUREMENT TITLE OR NUMBER: 805

SURVEYS WHERE A MEASUREMENT WAS TAKEN

MEASUREMENT NUMBER: 805
MEASUREMENT TITLE: STATURE

SURVEY	SURVEY TITLE
1	AIR FORCE WOMEN 1968 NONRATED
2	AIR FORCE MEN PILOTS 1967
3	AIR FORCE MEN 1965 NONRATED
4	ARMY MEN 1966
5	ARMY WOMEN 1977
6	AIR FORCE WOMEN 1968 PILOT SUBSET
7	ARMY MEN 1977 SUBSET

Press <RETURN> to continue

5.3 LIST MEASUREMENTS BY SURVEY

This option lists active surveys in the data base and allows the user to display the measurement titles and numbers of those measures taken in the selected survey. In the following example survey 1 is selected.

LIST MEASUREMENTS IN SURVEY

	SURVEY	SURVEY TITLE
(A)	1	AIR FORCE WOMEN 1968 NONRATED
(B)	6	AIR FORCE WOMEN 1968 PILOT SUBSET
(C)	2	AIR FORCE MEN PILOTS 1967
(D)	3	AIR FORCE MEN 1965 NONRATED
(E)	4	ARMY MEN 1966
(F)	5	ARMY WOMEN 1977
(G)	7	ARMY MEN 1977 SUBSET
(X)	EXIT	

MEASUREMENTS TAKEN IN SURVEY

SURVEY NAME: AIR FORCE WOMEN 1968 NONRATED

NUMBER	MEASUREMENT TITLE
8	ABDOMINAL-EXT-CIRC
10	ABDOMINAL-EXT-DEPTH
18	ABDOMINAL-EXT-HT
23	ACROMION-HT
39	ACROMION-RADIALE-LTH
48	AGE
58	ANKLE-CIRC
64	ANKLE-HT
70	ARM-CIRC-AXILLARY
72	ARM-CIRC-BICEPS-RELAXED
73	ARM-CIRC-BICEPS-RELAXED-LEFT
77	ARM-CIRC-BICEPS-FLEXED

Press RETURN to continue, "S" to stop

5.4 LIST MEASUREMENTS BY BODY REGION

Each measurement has been classified in the data base by body region. This option lists the body region classifications and allows the user to display measurement titles and numbers by body region. This is helpful when trying to determine which measurements are available for a given region in the body. An example from the whole body category is shown.

LIST MEASUREMENTS BY BODY REGION

	REGION #	BODY REGION
(A)	1	WHOLE BODY
(B)	2	HEAD & NECK
(C)	3	TORSO
(D)	4	ARM (TOTAL)
(E)	5	UPPER ARM
(F)	6	FOREARM
(G)	7	HAND
(H)	8	LEG (TOTAL)
(I)	9	THIGH
(J)	10	CALF (LOWER LEG)
(K)	11	FOOT
(L)	12	MISCELLANEOUS

(X) EXIT

MEASUREMENTS IN BODY REGION

BODY REGION: WHOLE BODY

NUMBER	MEASUREMENT TITLE
167	BODY-LTH-SUPINE-KNEES-FLEXED
169	BOWED-TORSO-HT
405	GRIP-REACH-OVERHEAD
538	KNEELING-HT
654	OVERHEAD-REACH-SIT
655	OVERHEAD-REACH-FORWARD
758	SITTING-HT
760	SITTING-HT-RELAXED
805	STATURE
806	STATURE-CLOTHED
807	STATURE-MAXIMUM

Press RETURN to continue, "S" to stop

5.5 LIST MEASUREMENTS BY TYPE

Each measurement has been classified in the data base by measurement type. Circumferences, arcs, heights, etc. have been grouped together. This option lists the measurement type classifications and allows the user to display the measurement titles and numbers in each class. An example from the arcs category is shown.

LIST MEASUREMENTS BY MEASUREMENT TYPE

	TYPE #	TYPE DESCRIPTION
(A)	1	ARCS
(B)	2	BREADTHS
(C)	3	CIRCUMFERENCES
(D)	4	DEPTHS
(E)	5	DISTANCES
(F)	6	HEIGHTS
(G)	7	LENGTHS
(H)	8	REACHES
(I)	9	SEATED
(J)	10	SKIN-FOLDS
(K)	11	MISCELLANEOUS
(L)	12	CODED VARIABLES
(M)	13	STRENGTHS

(X) EXIT

LIST BY MEASUREMENT TYPE

MEASUREMENT TYPE: ARCS

NUMBER	MEASUREMENT TITLE
93	BACK-ARC-AT-BUST
95	BACK-ARC-AT-WAIST
144	BITRAGION-CORONAL-ARC
150	BITRAGION-MENTON-ARC
152	BITRAGION-MINIMUM-FRONTAL-ARC
154	BITRAGION-NUCHALE-ARC
156	BITRAGION-SUBMANDIBULAR-ARC
158	BITRAGION-SUBNASALE-ARC
185	BUTTOCK-CURVATURE
269	DELTOID-ARC
616	MINIMUM-FRONTAL-ARC
702	SAGITTAL-ARC-INION

Press RETURN to continue, "S" to stop

5.6 GLOSSARY AND MEASUREMENT DESCRIPTIONS

The Glossary menu presents options which provide the user with descriptive and informative data including anthropometric terms and measurement descriptions available from the data base.

GLOSSARY AND MEASUREMENT DESCRIPTIONS

(A) LIST ALL TERMS IN GLOSSARY

(B) STRING SEARCH FOR TERM IN GLOSSARY

(C) LOOK UP TERM IN GLOSSARY

(D) MEASUREMENT DESCRIPTIONS

(E) CODED VARIABLE DESCRIPTIONS

(X) EXIT

5.6.1 LIST ALL TERMS IN GLOSSARY

This option provides the user with a list of all the terms available in the anthropometric term glossary.

ANTHROPOMETRIC TERMS

ABDOMINAL
ABDOMINAL-EXTENSION-LEVEL
ABDUCT
ACROMIAL
ACROMIALE
ACROMION
ADDUCT
ANTERIOR
ANTERIOR-SUPERIOR-ILIAC-SPINE
ANTERO
ANTHROPOMETRY
ARM
AURICLE
AURICULAR
AXILLA

Press RETURN to continue, "S" to stop

5.6.2 STRING SEARCH FOR TERM IN GLOSSARY

This option allows the user to input a character string and display all those terms in the anthropometric glossary which contain the string.

```
                    STRING SEARCH FOR TERM IN GLOSSARY


                    INPUT TERM SEARCH STRING:  ACROM
```

```
                    STRING SEARCH FOR TERM IN GLOSSARY

                    ACROMIAL
                    ACROMIALE
                    ACROMION


                    Press <RETURN> to continue
```

5.6.3 LOOK UP TERM IN GLOSSARY

This option displays the definition of a requested anthropometric term from the glossary.

LOOK UP TERM IN GLOSSARY

INPUT ANTHROPOMETRIC TERM: ACROMIALE

ANTHROPOMETRIC TERM DEFINITION

TERM: ACROMIALE

LANDMARK TITLE FOR THE MOST LATERAL POINT ON THE ACROMIAL PROCESS OF THE SCAPULA (SHOULDER BLADE). FREQUENTLY INTERCHANGEABLE WITH ACROMION.

Press <RETURN> to continue

5.6.4 MEASUREMENT DESCRIPTIONS

Each measurement title has an entry in the data base which describes the measurement. The description may be requested by measurement number, title, or alternate name.

MEASUREMENT DESCRIPTIONS

STANDARD ABBREVIATIONS

BRTH - BREADTH	HT - HEIGHT
CIRC - CIRCUMFERENCE	LTH - LENGTH
DIAM - DIAMETER	SIT - SITTING
DIST - DISTANCE	SKF - SKINFOLD
EXT - EXTENSION	STD - STANDING

INPUT MEASUREMENT TITLE OR NUMBER: STATURE

MEASUREMENT DESCRIPTION

MEASUREMENT TITLE: STATURE

SUBJECT STANDS ERECT, HEAD IN THE FRANKFORT PLANE, HEELS TOGETHER, AND WEIGHT DISTRIBUTED EQUALLY ON BOTH FEET - THE DISTANCE FROM THE FLOOR TO THE TOP OF THE HEAD.

Press <RETURN> to continue

5.6.5 CODED VARIABLE DESCRIPTIONS

Many variables in the data base have been entered using codes. Numbers have been assigned for certain categories of data. This option allows the user to request data by number, title, or alternate name. The codes and their corresponding descriptions will be displayed.

CODED VARIABLE DESCRIPTIONS

STANDARD ABBREVIATIONS

BRTH - BREADTH	HT - HEIGHT
CIRC - CIRCUMFERENCE	LTH - LENGTH
DIAM - DIAMETER	SIT - SITTING
DIST - DISTANCE	SKF - SKINFOLD
EXT - EXTENSION	STD - STANDING

INPUT MEASUREMENT TITLE OR NUMBER: BLOOD-TYPE

CODED VARIABLE DESCRIPTIONS

MEASUREMENT NUMBER: 1003
MEASUREMENT TITLE: BLOOD-TYPE

CODE	CODE DESCRIPTION
1.	A
2.	B
3.	AB
4.	O

Press <RETURN> to continue

5.7 MEASUREMENT STATISTICS

The Measurement Statistics menu presents options available to the user to retrieve statistical data for a measurement by survey. This menu only appears if a user has special authorization from AAMRL/HEG to execute SAS procedures. Otherwise the program defaults to displaying only measurement summary statistics.

MEASUREMENT DATA STATISTICS

(A) SUMMARY STATISTICS BY SURVEY

(B) BUILD SAS DATA SET

(X) EXIT

5.7.1 SUMMARY STATISTICS BY SURVEY

Summary statistics for each measurement by survey have been computed and entered into the data base. These statistics may be requested by measurement number, title, or alternate name.

MEASUREMENT DATA STATISTICS

STANDARD ABBREVIATIONS

BRTH	- BREADTH	HT	- HEIGHT
CIRC	- CIRCUMFERENCE	LTH	- LENGTH
DIAM	- DIAMETER	SIT	- SITTING
DIST	- DISTANCE	SKF	- SKINFOLD
EXT	- EXTENSION	STD	- STANDING

INPUT MEASUREMENT TITLE OR NUMBER: STATURE

The summary statistics for each measurement may be displayed in either metric units or English units.

MEASUREMENT DATA STATISTICS
BY SURVEY

DATA REQUESTED IN UNIT TYPE:

(A) METRIC UNITS

(B) ENGLISH UNITS

The active anthropometric surveys containing measurement summary statistics for measurements taken in the survey are displayed. The user selects the survey from which the summary statistics are requested. Survey 1 is selected in the following example.

LIST MEASUREMENTS IN SURVEY

	SURVEY	SURVEY TITLE
(A)	1	AIR FORCE WOMEN 1968 NONRATED
(B)	6	AIR FORCE WOMEN 1968 PILOT SUBSET
(C)	2	AIR FORCE MEN PILOTS 1967
(D)	3	AIR FORCE MEN 1965 NONRATED
(E)	4	ARMY MEN 1966
(F)	5	ARMY WOMEN 1977
(G)	7	ARMY MEN 1977 SUBSET
(X)	EXIT	

The requested measurement summary statistics are displayed. Frequency data for each measurement are also available, and may be requested by entering a carriage return at the end of the summary statistics display. The frequency data will then be retrieved from the data base and displayed. If an "S" is entered, frequency data will not be displayed.

MEASUREMENT SUMMARY STATISTICS

SURVEY NUMBER: 1 SURVEY NAME: AIR FORCE WOMEN 1968 NONRATED
METRIC NUMBER: 805 METRIC TITLE: STATURE

SAMPLE SIZE:	1905	MEAN:	162.10	STD DEV:	6.01
COEF. OF VARIATION:	3.70	SKEWNESS:	.16	KURTOSIS:	-.22
STD. ERROR OF MEAN:	.14	MINIMUM:	144.6	MAXIMUM:	183.0

FIVE LOWEST:	144.5	145.5	147.0	147.0	147.5
FIVE HIGHEST:	179.5	179.6	180.0	180.7	183.0

PERCENTILES:

1ST	2ND	3RD	5TH	10TH	25TH	50TH
149.5	150.5	151.3	152.4	154.3	157.8	162.0

75TH	90TH	95TH	97TH	98TH	99TH
166.2	169.9	172.1	173.6	174.7	176.5

PRESS <RETURN> FOR FREQ DATA, "S" TO STOP

FREQUENCY DATA

SURVEY NUMBER: 1 SURVEY NAME: AIR FORCE WOMEN 1968 NONRATED
METRIC NUMBER: 805 METRIC TITLE: STATURE
SAMPLE SIZE: 1905 MEAN: 162.10 STD DEV: 6.01

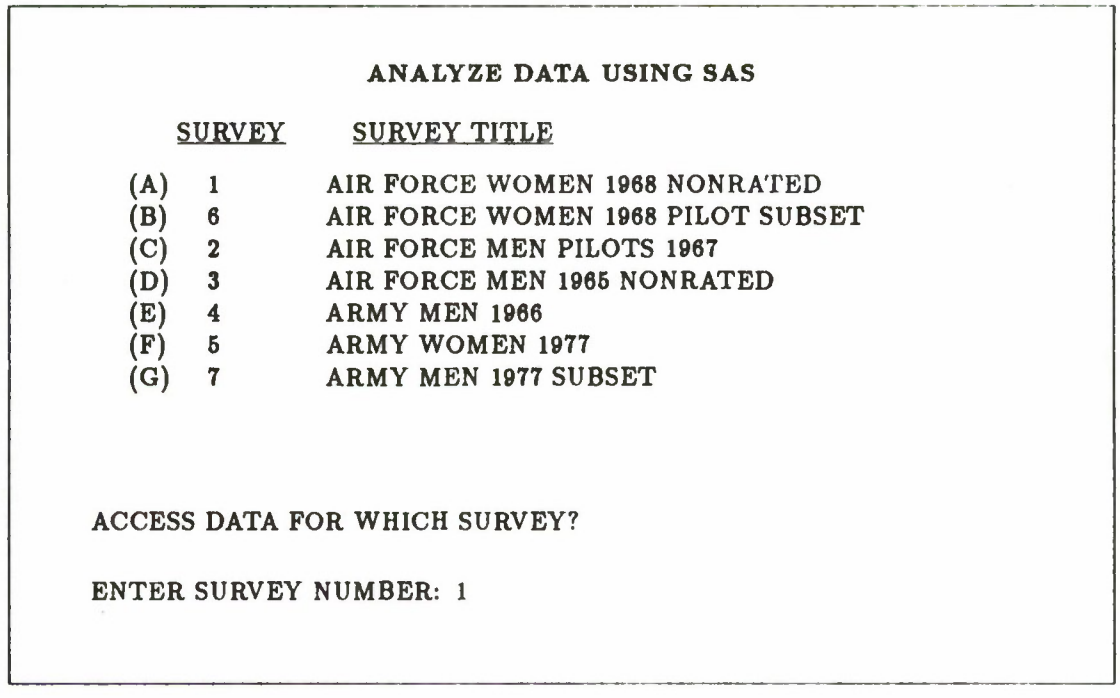
		PERCENTS				PERCENTS	
VALUE	CNT	CELL	CUM	VALUE	CNT	CELL	CUM
145.00	1	.1	.1	151.50	11	.6	3.5
145.50	1	.1	.1	152.00	18	.9	4.4
147.00	2	.1	.2	152.50	16	.8	5.2
147.50	2	.1	.3	153.00	22	1.2	6.4
148.00	4	.2	.5	153.50	20	1.0	7.5
148.50	1	.1	.6	154.00	25	1.3	8.8
149.00	5	.3	.8	154.50	25	1.3	10.1
149.50	7	.4	1.2	155.00	41	2.2	12.2
150.00	2	.1	1.3	155.50	44	2.3	14.5
150.50	11	.6	1.9	156.00	47	2.5	17.0
151.00	19	1.0	2.9	156.50	47	2.5	19.5

PRESS <RETURN> FOR FREQ DATA, "S" TO STOP

5.7.2 BUILD SAS DATA SET

This option allows authorized users to build SAS input command procedures to extract subject measurement data meeting certain criteria from a survey.

The active anthropometric surveys are displayed. The user selects the survey from which the SAS analysis is to be made.



ANALYZE DATA USING SAS

	SURVEY	SURVEY TITLE
(A)	1	AIR FORCE WOMEN 1968 NONRATED
(B)	6	AIR FORCE WOMEN 1968 PILOT SUBSET
(C)	2	AIR FORCE MEN PILOTS 1967
(D)	3	AIR FORCE MEN 1965 NONRATED
(E)	4	ARMY MEN 1966
(F)	5	ARMY WOMEN 1977
(G)	7	ARMY MEN 1977 SUBSET

ACCESS DATA FOR WHICH SURVEY?

ENTER SURVEY NUMBER: 1

This display screen supplies information on how to enter criteria input for SAS. The subset of subject data to extract is determined by these criteria.

ANALYZE DATA USING SAS
DATA SELECTION CRITERIA

Define the subset of subjects you would like data extracted for.
A maximum of 30 criterion are allowed. A "+" continues criteria input to the next line. A maximum of 9 input lines is allowed. Only metric data queries are handled. Comparison operators include:

< or LT (less than)	<= or LE (less than or equal to)
> or GT (greater than)	>= or GE (greater than or equal to)
= or EQ (equal to)	NE (not equal to)

Logical operators include:
& or AND (Logical AND) | or OR (logical OR) NOT (Logical NOT)

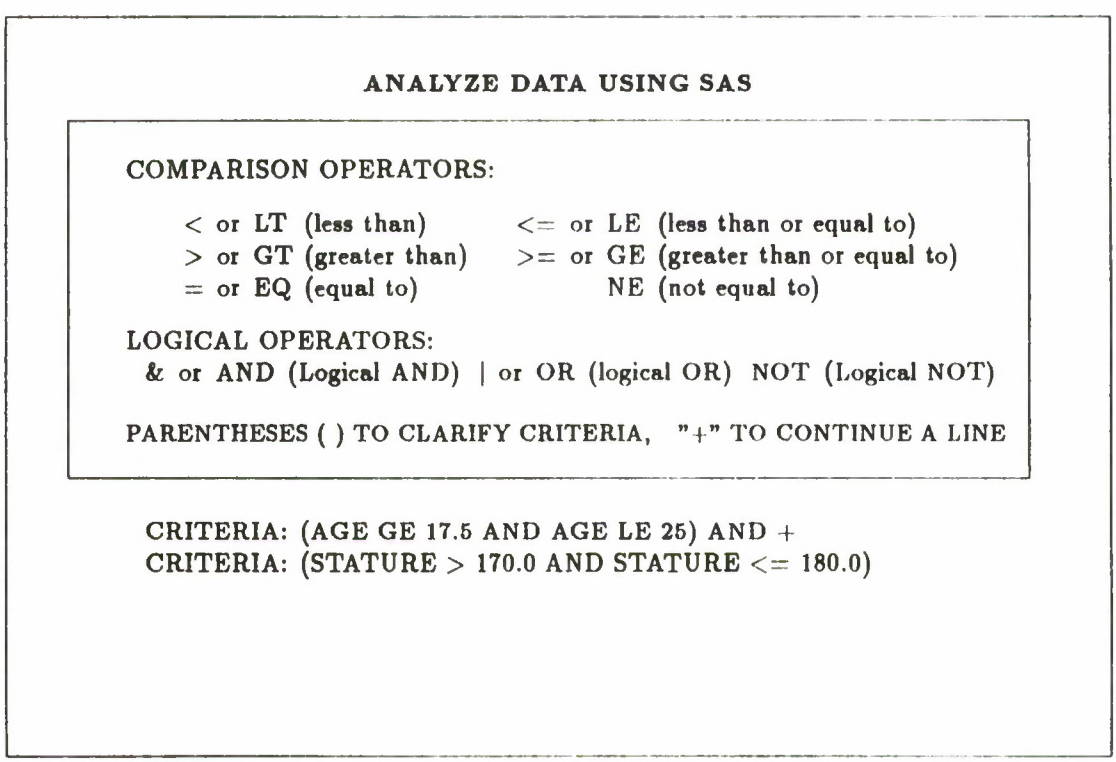
Parentheses may be used to clarify SAS input criteria.
For example, to select subject data where age is over 21 and up to and including 25.5 with stature less that 170.0, your criteria input is:

CRITERIA: (AGE > 21 AND AGE <= 25.5) AND STATURE LT 170.0

Press <RETURN> to continue

Criteria are entered from this screen. A minimum of one selection criterion qualifier must be entered. Valid comparison and logical operators for input are displayed. Criteria measurement variables may be entered by measurement name, title, or alternate name. Criteria are checked for a valid sequence of input by the program but the logic of the command cannot be checked. This can result in the SAS procedure not finding any data which meet the criteria specified. Data values specified in criteria selection must be entered in metric units. Parentheses may be used to further clarify selection criteria and avoid confusion. Criteria may be entered across lines if a '+' is entered on the preceding line.

In the sample display, data are requested for those subjects with ages greater than or equal to 17.5 years and less than or equal to 25 years whose stature is greater than 170.0 cm and less than or equal to 180.0 cm.



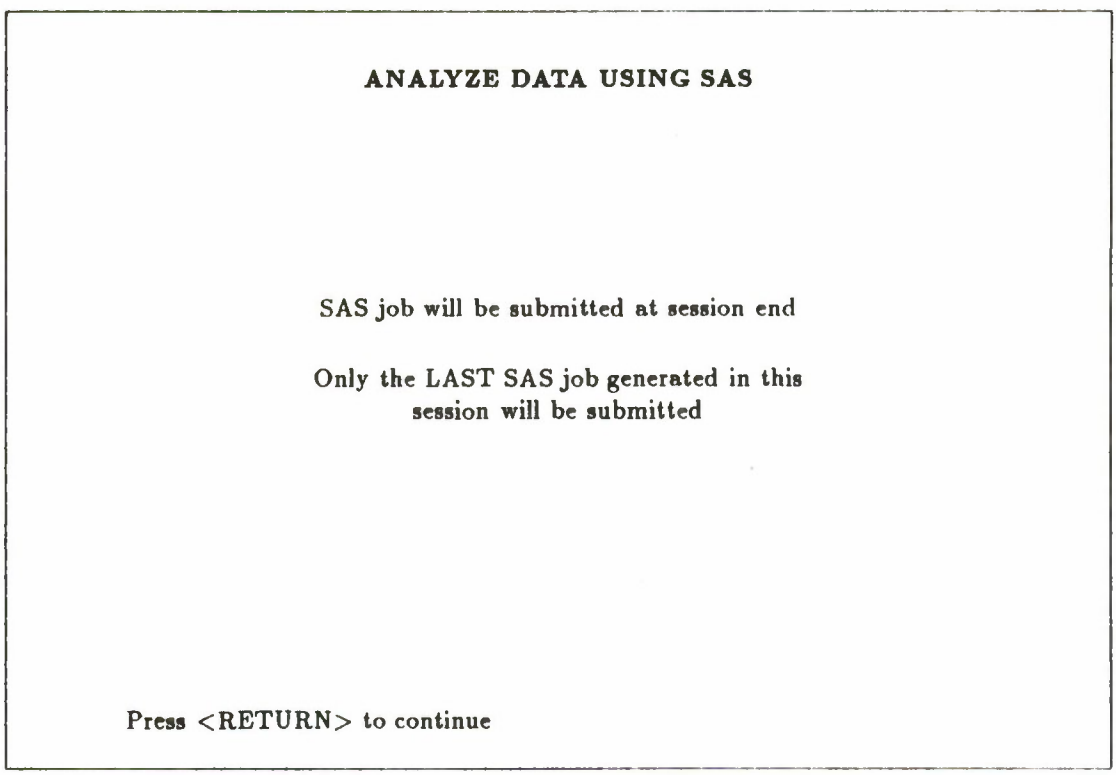
A procedure file will be created to run the SAS procedure UNIVARIATE for the data requested. Selection criteria measurement data are automatically analyzed by SAS and the option to analyze up to 10 additional measurement variables is available. These are entered by measurement number, title, or alternate name. In the sample display, the measurements SITTING-HT and measurement number 957 will be analyzed in SAS along with AGE and STATURE as specified in the criteria input. Note that STATURE was entered in both the criteria and additional measurement data screens. While this is not necessary, if it is done it will not be run twice. Duplicate variables will be deleted from the analysis.

ANALYZE DATA USING SAS

REQUESTING DATA FOR WHICH MEASUREMENTS? (MAX 10)

MEASUREMENT NUMBER OR TITLE: STATURE
MEASUREMENT NUMBER OR TITLE: SITTING-HT
MEASUREMENT NUMBER OR TITLE: 957
MEASUREMENT NUMBER OR TITLE: <RETURN>

The user will be notified when the SAS procedure has been built. The SAS job will be submitted when exiting the QUERY program. As noted, only the final SAS job created will be submitted. If a mistake is made when creating a SAS job, the job may be recreated by requesting the SAS build option again.



5.7.3 SUBMITTING A CREATED SAS JOB

When the user has selected EXIT from the Master menu, if a SAS procedure had been built the system will commence to submit the SAS job. The user will be prompted as to whether he would like the job submitted. If a 'y' is entered, the SAS job will be initiated and will tie up the user's terminal until the job is complete. At job completion, the option to print the job is given and instructions on how to look at the SAS output files is displayed. If the user chooses not to have the job run automatically, instructions are given on how to run the job at a later time. The job is initiated at QUERY exit as follows:

Would you like your SAS job submitted? (y/n/cr=y): y

SAS job has been submitted . . . please wait

Would you like the results printed out? (y/n/cr=y): n

To look at your SAS run LOG file and/or output file LIS file, use the commands:

TYPE SASPROC.LOG
TYPE SASPROC.LIS

To print your results, use the commands:

PRINT SASPROC.LOG
PRINT SASPROC.LIS

FILES:

SASPROC.SAS - contains SAS commands
SASPROC.LOG - contains information about your SAS job
SASPROC.LIS - contains SAS results

The SAS files generated include SASPROC.SAS which contains the SAS commands and is the file submitted to the system to run the SAS job. The SAS log file SASPROC.LOG generated gives information on how many observations (subjects) met the specified criteria and the number of measurement variables which were analysed. The log file will also inform you if a measurement was not available in a survey. In the case where the selection criteria were not logical or where there were no subjects who met the specified criteria, the log file will report that zero observations were made. SASPROC.LIS contains the SAS output file for the SAS procedure UNIVARIATE. This file will not exist if there were zero observations made in the SAS job.

Each time a SAS authorised user runs the QUERY data base program, the existing SASPROC.SAS, SASPROC.LOG, and SASPROC.LIS files are deleted. In the case where the user would like to save these files, before QUERY is executed again, the RENAME command may be used to rename these files so they will not be deleted. The format of the RENAME command is:

RENAME *infile outfile*

For example, if the SAS procedure file contained commands to analyze 1967 AF Flyers data and the user wishes to keep the files for later reference, the following commands would accomplish this:

```
RENAME SASPROC.SAS AFFLY67.SAS
RENAME SASPROC.LOG AFFLY67.LOG
RENAME SASPROC.LIS AFFLY67.LIS
```

The user may then run the data base program and be ensured that SAS job files created previously have been saved.

6.0 ERROR REPORTING

In the case that a system error is encountered a message will be broadcast on the terminal specifying a RIM ERROR if the error was detected within the data base, or a FILE ERROR if the error resulted from a file i/o operation. The error number and the routine in which the error was encountered will also be displayed. All error information should be noted and reported to AAMRL/HEG.

APPENDIX

MEASUREMENT NUMBERS AND TITLES

January 1988

NUMBER	MEASUREMENT TITLE
6	ABDOMINAL-DEPTH-SIT
7	ABDOMINAL-EXT-BRTH-SIT
8	ABDOMINAL-EXT-CIRC
10	ABDOMINAL-EXT-DEPTH
18	ABDOMINAL-EXT-HT
23	ACROMION-HT
25	ACROMION-HT-SIT
39	ACROMION-RADIALE-LTH
42	ACROMION-TO-BICEPS-CIRC-LEVEL
48	AGE
58	ANKLE-CIRC
64	ANKLE-HT
70	ARM-CIRC-AXILLARY
72	ARM-CIRC-BICEPS-RELAXED
73	ARM-CIRC-BICEPS-RELAXED-LEFT
77	ARM-CIRC-BICEPS-FLEXED
78	ARM-CIRC-BICEPS-FLEXED-LEFT
90	AXILLA-HT
91	AXILLA-TO-WAIST
93	BACK-ARC-AT-BUST
95	BACK-ARC-AT-WAIST
103	BIACROMIAL-BRTH
110	BICEPS-SKF
122	BIDELTOID-BRTH
126	BIGONIAL-BRTH
130	BIILIOCRISTALE-BRTH
134	BIMALLEOLAR-BRTH
138	BIOCULAR-BRTH
140	BISPINOUS-BRTH
142	BITRAGION-BRTH
144	BITRAGION-CORONAL-ARC
150	BITRAGION-MENTON-ARC
152	BITRAGION-MINIMUM-FRONTAL-ARC
154	BITRAGION-NUCHALE-ARC
156	BITRAGION-SUBMANDIBULAR-ARC
158	BITRAGION-SUBNASALE-ARC

MEASUREMENT NUMBERS AND TITLES (cont.)

January 1988

NUMBER	MEASUREMENT TITLE
161	BITROCHANTERION-BRTH
165	BIZYGOMATIC-BRTH
167	BODY-LTH-SUPINE-KNEES-FLEXED
169	BOWED-TORSO-HT
172	BUSTPOINT-TO-BUSTPOINT-BRTH
185	BUTTOCK-CURVATURE
187	BUTTOCK-HEEL-LTH
188	BUTTOCK-HT
194	BUTTOCK-KNEE-LTH
200	BUTTOCK-POPLITEAL-LTH
207	CALF-CIRC
209	CALF-CIRC-LEFT
215	CALF-HT
219	CERVICALE-HT
223	CHEST-BRTH
227	CHEST-BRTH-BONE
230	CHEST-CIRC
231	CHEST-CIRC-AT-SCYE
232	CHEST-CIRC-BELOW-BUST
236	CHEST-DEPTH
237	CHEST-HT
249	CROTCH-HT
251	CROTCH-LTH-NATURAL-WAIST
252	CROTCH-LTH-UMBILICUS
265	DACTYLION-HT
269	DELTOID-ARC
277	EAR-BRTH
280	EAR-LTH
282	EAR-LTH-ABOVE-TRAGION
285	EAR-PROTRUSION
286	EAR-TO-EAR-BRTH
293	ELBOW-BRTH-BONE
297	ELBOW-BRTH-BONE-LEFT
303	ELBOW-CIRC-EXTENDED
305	ELBOW-CIRC-FLEXED
307	ELBOW-GRIP-LTH

MEASUREMENT NUMBERS AND TITLES (cont.)

January 1988

NUMBER	MEASUREMENT TITLE
309	ELBOW-HT
312	ELBOW-REST-HT
313	ELBOW-REST-HT-STD
324	ELBOW-WRIST-LTH
326	EXTERNAL-CANTHUS-TO-OCCIPUT
327	EXTERNAL-CANTHUS-TO-VERTEX
330	EYE-HT-SIT-EXTERNAL-CANTHUS
331	EYE-HT-SIT-INTERNAL-CANTHUS
340	FIBULA-HT
344	FINGER-III-DIAMETER
356	FOOT-BRTH
358	FOOT-CIRC
362	FOOT-LTH
370	FOREARM-CIRC-EXTENDED
371	FOREARM-CIRC-FLEXED
375	FOREARM-HAND-LTH
377	FOREARM-TO-FOREARM-BRTH-MINIMUM
378	FOREARM-TO-FOREARM-BRTH-NORMAL
391	GLABELLA-TO-OCCIPUT
393	GLABELLA-TO-TOP-OF-HEAD
398	GLUTEAL-FURROW-HT
405	GRIP-REACH-OVERHEAD
407	GRIP-STRENGTH
411	HAND-BRTH-AT-METACARPALE
413	HAND-BRTH-AT-THUMB
416	HAND-CIRC-AT-METACARPALE
417	HAND-CIRC-OVER-THUMB
420	HAND-LTH-DISTAL-WRIST-CREASE
421	HAND-LTH-NAVICULAR
422	HAND-LTH-RADIAL-STYLOID
424	HAND-SKF
425	HAND-THICKNESS-AT-METACARPALE-III
427	HEAD-BRTH
428	HEAD-BRTH-MAXIMUM-FRONTAL
430	HEAD-CIRC
433	HEAD-DIAGONAL-INION-TO-PRONASALE

MEASUREMENT NUMBERS AND TITLES (cont.)

January 1988

NUMBER	MEASUREMENT TITLE
435	HEAD-DIAGONAL-MAXIMUM-FROM-MENTON
436	HEAD-DIAGONAL-MAXIMUM-FROM-NUCHALE
437	HEAD-DIAGONAL-MENTON-TO-OCCIPUT
441	HEAD-LTH
445	HEEL-ANKLE-CIRC
450	HEEL-BRTH
457	HIP-BRTH
459	HIP-BRTH-SIT
462	HIP-CIRC
464	HIP-CIRC-SIT
466	HIP-CIRC-7-BELOW-WAIST
468	HIP-CIRC-9-BELOW-WAIST
471	HIP-DEPTH
489	ILIOCRISTALE-HT
492	INSTEP-CIRC-MID
493	INSTEP-CIRC-VERTICAL
496	INSTEP-LTH
500	INTEROCULAR-DIST
503	INTERPUPILLARY-DIST
506	INTERSCYE-DIST
507	INTERSCYE-DIST-MAX
510	INTERSCYE-FRONT
511	JUXTANIPPLE-SKF
512	KNEE-BRTH-BONE
513	KNEE-BRTH-BONE-LEFT
515	KNEE-CIRC
517	KNEE-CIRC-SIT
528	KNEE-HT-FLEXED-SUPINE
529	KNEE-HT-SIT
536	KNEE-TO-KNEE-BRTH
538	KNEELING-HT
540	KNEELING-LEG-LTH
543	LATERAL-MALLEOLUS-HT
547	LIP-LTH
549	LIP-LTH-SMILING
552	LIP-PROTRUSION-TO-OCCIPUT

MEASUREMENT NUMBERS AND TITLES (cont.)

January 1988

NUMBER	MEASUREMENT TITLE
555	LIP-TO-LIP-LTH
576	MEDIAL-CALF-SKF
579	MEDIAL-MALLEOLUS-HT
583	MENTON-CRINION-LTH
586	MENTON-TO-NASAL-ROOT-DEPRESSION-LTH
588	MENTON-TO-OCCIPUT
592	MENTON-TO-SUBNASALE-LTH
595	MENTON-TO-TOP-OF-HEAD
601	METACARPALE-HT
612	MIDSHOULDER-HT-SIT
616	MINIMUM-FRONTAL-ARC
618	MINIMUM-FRONTAL-BRTH
625	NASAL-ROOT-BRTH
631	NASAL-ROOT-DEPRESSION-TO-OCCIPUT
633	NASAL-ROOT-DEPRESSION-TO-TOP-OF-HEAD
636	NECK-CIRC-BASE
637	NECK-CIRC-BELOW-LARYNX
639	NECK-CIRC-OVER-LARYNX
644	NECK-LTH-ANTERIOR
645	NECK-LTH-POSTERIOR-INION
647	NECK-LTH-POSTERIOR-NUCHALE
648	NECK-TO-BUSTPOINT-LTH
651	NOSE-BRTH
652	NOSE-PROTRUSION
654	OVERHEAD-REACH-SIT
655	OVERHEAD-REACH-FOREWARD
656	PALM-LTH-WRIST-CREASE
658	PALM-LENGTH-NAVICULAR
663	PATELLA-BOTTOM-HT
665	PATELLA-MID-HT
666	PATELLA-TOP-HT
674	PHILTRUM-LTH
678	POPLITEAL-HT-SIT
690	PRONASALE-TO-OCCIPUT
692	PRONASALE-TO-TOP-OF-HEAD
698	RADIALE-STYLION-LTH

MEASUREMENT NUMBERS AND TITLES (cont.)

January 1988

NUMBER	MEASUREMENT TITLE
702	SAGITTAL-ARC-INION
705	SAGITTAL-ARC-NUCHALE
732	SCYE-CIRC-OVER-ACROMION
735	SCYE-CIRC-OVER-SHOULDER
743	SHOULDER-BRTH-BOWED
745	SHOULDER-BRTH-REACHING-OVERHEAD
747	SHOULDER-CIRC
751	SHOULDER-ELBOW-LTH
754	SHOULDER-LTH
758	SITTING-HT
760	SITTING-HT-RELAXED
764	SLEEVE-INSEAM-LTH
772	SLEEVE-LTH
797	SLEEVE-OUTSEAM-LTH
801	SPHYRION-HT
802	SPINE-TO-ELBOW-LTH
803	SPINE-TO-SCYE-LTH
805	STATURE
806	STATURE-CLOTHED
807	STATURE-MAXIMUM
808	STATURE-REPORTED
814	STOMION-TO-OCCIPUT
815	STOMION-TO-TOP-OF-HEAD
821	STRAP-LTH
825	SUBNASALE-TO-NASAL-ROOT-DEPRESSION
829	SUBNASALE-TO-OCCIPUT
830	SUBNASALE-TO-TOP-OF-HEAD
833	SUBSCAPULAR-SKF
834	SUBSCAPULAR-SKF-II
837	SUBSTERNALE-HT
841	SUPRASTERNALE-HT
844	SUPRAILIAC-SKF
845	SUPRAILIAC-SKF-II
848	SUPRAPATELLA-SKF
851	THIGH-CIRC-DISTAL
852	THIGH-CIRC-PROXIMAL

MEASUREMENT NUMBERS AND TITLES (cont.)

January 1988

NUMBER	MEASUREMENT TITLE
853	THIGH-CIRC-PROXIMAL-SIT
856	THIGH-CLEARANCE
859	THIGH-TO-THIGH-BRTH-SIT
864	THUMB-LTH
867	THUMB-TIP-REACH
869	THUMB-TIP-REACH-EXTENDED
873	TIBIALE-HT
880	TRAGION-TO-OCCIPUT
882	TRAGION-TO-TOP-OF-HEAD
888	TRICEPS-SKF
890	TRICEPS-SKF-II
894	TROCHANTERION-HT
916	VERTICAL-TRUNK-CIRC
917	VERTICAL-TRUNK-CIRC-SIT
919	WAIST-BACK-LTH-NATURAL
921	WAIST-BACK-LTH-OMPHALION
924	WAIST-BRTH-NATURAL
928	WAIST-BRTH-OMPHALION
931	WAIST-CIRC-NATURAL
932	WAIST-CIRC-OMPHALION
935	WAIST-CIRC-OMPHALION-SIT
939	WAIST-DEPTH-NATURAL
943	WAIST-DEPTH-OMPHALION
945	WAIST-FRONT-LTH-NATURAL
946	WAIST-FRONT-LTH-OMPHALION
949	WAIST-HT-NATURAL
950	WAIST-HT-OMPHALION
951	WAIST-HT-NATURAL-SIT
957	WEIGHT
958	WEIGHT-CLOTHED
960	WEIGHT-REPORTED
964	WRIST-BRTH-BONE
967	WRIST-CIRC-MINIMUM
970	WRIST-CIRC-STYLION
973	WRIST-HT
985	XIPHOID-SKF

MEASUREMENT NUMBERS AND TITLES (cont.)

January 1988

NUMBER	MEASUREMENT TITLE
1001	MARITAL-STATUS-AFW68
1002	COMMAND-AFW68
1003	BLOOD-TYPE
1004	RH-FACTOR
1005	HANDEDNESS
1006	BIRTHPLACE-SUBJECT
1007	BIRTHPLACE-FATHER
1008	BIRTHPLACE-MOTHER
1009	YEAR-OF-BIRTH
1010	AGE-AT-MENARCHE-AFW68
1011	YEAR-MEASURED
1012	OCCUP-AFW68
1013	RACE-AFW68
1014	RANK-AFW68
1015	AERO-RATING-AFM67
1016	AIRCRAFT-AFM67
1017	COMMAND-AFM67
1018	AERO-RATING-AFM65
1019	RELIGION
1020	EDUCATION
1021	MARITAL-STATUS-AFM65
1022	YEAR-ENTERED-AFM65
1023	BOOT-SIZE-LTH-ARM66
1024	BOOT-SIZE-WIDTH-ARM66
1025	RANK-ARM66
1026	PAY-GRADE-ARM66
1027	SERVICE-LTH-ARM66
1028	EDUCATION-ARM66
1029	MARITAL-STATUS-ARM66
1030	BIRTHPLACE-SUBJECT-ARM66
1031	BIRTHPLACE-FATHER-ARM66
1032	BIRTHPLACE-MOTHER-ARM66
1033	RESIDENCE-LONGEST-ARM66
1034	NATL-EXTRACTION-ARM66
1035	TOE-BIGGEST-ARM66
1036	GLASSES-ARM66

MEASUREMENT NUMBERS AND TITLES (cont.)

January 1988

NUMBER	MEASUREMENT TITLE
1037	RACE-AFM67
1038	RANK-AFM67
1039	RACE-AFM65
1040	RANK-AFM65
1041	MOS-ARW77
1042	RACE-ARW77
1043	BIRTHDATE-ARW77
1044	SERVICE-LTH-ARW77
1045	RANK-ARW77
1046	BIRTHPLACE-ARW77
1501	STRENGTH-CENTER-SIT-45-AVG1
1502	STRENGTH-CENTER-SIT-45-AVG2
1503	STRENGTH-CENTER-SIT-45-PEAK1
1504	STRENGTH-CENTER-SIT-45-PEAK2
1505	STRENGTH-SIDE-SIT-45-AVG1
1506	STRENGTH-SIDE-SIT-45-AVG2
1507	STRENGTH-SIDE-SIT-45-PEAK1
1508	STRENGTH-SIDE-SIT-45-PEAK2
1509	STRENGTH-ONE-HAND-STD-100-AVG1
1510	STRENGTH-ONE-HAND-STD-100-AVG2
1511	STRENGTH-ONE-HAND-STD-100-PEAK1
1512	STRENGTH-ONE-HAND-STD-100-PEAK2
1513	STRENGTH-TWO-HAND-SIT-38-AVG1
1514	STRENGTH-TWO-HAND-SIT-38-AVG2
1515	STRENGTH-TWO-HAND-SIT-38-PEAK1
1516	STRENGTH-TWO-HAND-SIT-38-PEAK2
1517	STRENGTH-TWO-HAND-SIT-50-AVG1
1518	STRENGTH-TWO-HAND-SIT-50-AVG2
1519	STRENGTH-TWO-HAND-SIT-50-PEAK1
1520	STRENGTH-TWO-HAND-SIT-50-PEAK2
1521	STRENGTH-TWO-HAND-STD-38-AVG1
1522	STRENGTH-TWO-HAND-STD-38-AVG2
1523	STRENGTH-TWO-HAND-STD-38-PEAK1
1524	STRENGTH-TWO-HAND-STD-38-PEAK2
1525	STRENGTH-TWO-HAND-STD-50-AVG1
1526	STRENGTH-TWO-HAND-STD-50-AVG2

MEASUREMENT NUMBERS AND TITLES (cont.)

January 1988

NUMBER	MEASUREMENT TITLE
1527	STRENGTH-TWO-HAND-STD-50-PEAK1
1528	STRENGTH-TWO-HAND-STD-50-PEAK2
1529	STRENGTH-TWO-HAND-STD-100-AVG1
1530	STRENGTH-TWO-HAND-STD-100-AVG2
1531	STRENGTH-TWO-HAND-STD-100-PEAK1
1532	STRENGTH-TWO-HAND-STD-100-PEAK2
1533	STRENGTH-TWO-HAND-STD-150-AVG1
1534	STRENGTH-TWO-HAND-STD-150-AVG2
1535	STRENGTH-TWO-HAND-STD-150-PEAK1
1536	STRENGTH-TWO-HAND-STD-150-PEAK2

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